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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,822	04/12/2001	Keiichi Sato	Q64076	1928

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EXAMINER	
GOFF II, JOHN L	
ART UNIT	**PAPER NUMBER**
1733	4

DATE MAILED: 10/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/832,822	Applicant(s) SATO, KEIICHI	
	Examiner John L. Goff	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 April 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 2* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 2* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 recites the limitation "the first process" in line 3. There is insufficient antecedent basis for this limitation in the claim. It is suggested to change "the first process" to - - a first process - -.

4. Claim 1 recites the limitation "the second process" in line 6. There is insufficient antecedent basis for this limitation in the claim. It is suggested to change "the second process" to - - a second process - -.

5. Claim 1 recites the limitation "the third process" in line 7. There is insufficient antecedent basis for this limitation in the claim. It is suggested to change "the third process" to - - a third process - -.

6. In claim 1, the phrases "plate-shaped" and "plate" are unclear and confusing. It is uncertain what is meant by the word "plate". Does it mean a smooth piece of material? Does it mean a circular material? This issue should be clarified and reworded as appropriate.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

8. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by McKague et al. (U.S. Patent 5,954,898).

McKague et al. are directed to a method of fabricating parts from composite materials (Column 1, lines 18-21 and Column 3, lines 1-21). McKague et al. teach composite preforms comprising reinforcing fiber (graphite) impregnated with thermosetting resin (epoxy) (Column 3, lines 62-64 and Column 11, lines 15-18). McKague et al. teach a method for fabricating parts from the composite preforms comprising stacking a plurality of the preforms (Figures 2 and 4 and Column 5, lines 26-29), laminating the stack using heat and pressure to form a composite laminate (Figures 2 and 4 and Column 5, lines 46-49, 52-53, and 62-64), cutting the laminate into a part's pattern (Figures 2 and 4 and Column 6, lines 11-15), heating the laminate to partially cure it (Figures 2 and 4 and Column 6, lines 17-20 and 34-38), and reshaping the laminate using a press forming tool (Figures 2 and 4 and Column 6, lines 20-22). McKague et

al. further teach using the partially cured part as a preform in creating other parts (Figures 4 and 10 and Column 7, lines 54-61).

9. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Yokokita et al. (EP 775561).

Yokokita et al. are directed to a process for forming a stampable sheet wherein the sheet contains reinforcement fiber impregnated with thermoplastic resin (Page 2, lines 5-6 and 10). Yokokita et al. teach a process for forming the stampable sheet comprising feeding layers of composite material (resin and fiber) to a laminating apparatus, laminating the layers into a stampable sheet using heating under pressure followed by cooling under pressure, and cutting the laminated layers into stampable sheets (Figure 1 and Page 5, lines 13-18). Yokokita et al. further teach a stamping process comprising heating the stampable sheet followed by press forming the sheet (Page 6, lines 51-55).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over McKague et al.

McKague et al. as applied above in paragraph 8 teach all of the limitations in claim 2 except for a teaching on the hardening degree of the part. However, as noted above McKague et al. teach only partially curing the formed part as the part can be used in further processing.

Furthermore, one of ordinary skill in the art at the time the invention was made would have readily appreciated only partially hardening the part to a degree of 1 to 50 % when using a thermosetting resin that is to be molded in a subsequent process.

12. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKague et al. in view of Yokokita et al.

As noted above McKague et al. teach a method of fabricating parts from composite materials wherein the materials are reinforcing fiber (graphite) impregnated with thermosetting resin (epoxy). McKague et al. are silent as to using a thermoplastic resin. Yokokita et al. as shown above teach a process for forming a stampable sheet wherein the sheet contains reinforcement fiber impregnated with thermoplastic resin. One of ordinary skill in the art at the time the invention was made would have readily appreciated using as the resin taught by McKague et al. a thermoplastic resin as suggested by Yokokita et al. as only the expected results would be achieved.

Regarding claim 2, as noted above McKague et al. teach only partially curing the formed part as the part can be used in further processing. Furthermore, one of ordinary skill in the art at the time the invention was made would have readily appreciated only partially hardening the part to a degree of 1 to 50 % when using a thermosetting resin that is to be molded in a subsequent process.

13. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokokita et al. in view of McKague et al.

As noted above Yokokita et al. teach a process for forming a stampable sheet wherein the sheet contains reinforcement fiber impregnated with thermoplastic resin. Yokokita et al. are

silent as to using a thermosetting resin. McKague et al. as shown above teach a method of fabricating parts from composite materials wherein the materials are reinforcing fiber (graphite) impregnated with thermosetting resin (epoxy). One of ordinary skill in the art at the time the invention was made would have readily appreciated using as the resin taught by Yokokita et al. a thermosetting resin as suggested by McKague et al. as only the expected results would be achieved.

Regarding claim 2, as noted above McKague et al. teach only partially curing the formed part as the part can be used in further processing. Furthermore, one of ordinary skill in the art at the time the invention was made would have readily appreciated only partially hardening the part to a degree of 1 to 50 % when using a thermosetting resin as suggested by Yokokita et al. as modified by McKague et al. that is to be molded in a subsequent process.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. DellaVecchia et al. (U.S. Patent 4,296,884) are directed to a stampable fiber reinforced thermoplastic sheet (Column 1, lines 5-9). DellaVecchia et al. teach a process for forming the stampable sheet comprising feeding layers of composite material (resin and fiber) to a laminating apparatus (Figure 1 and Column 2, lines 31-42), laminating the layers into a stampable sheet using heating under pressure followed by cooling under pressure (Figure 1 and Column 3, lines 13-17 and 34-45), and cutting the laminated layers into stampable sheets (Figure 1 and Column 3, lines 43-45). DellaVecchia et al. further teach a stamping process comprising

heating the stampable sheet followed by press forming the sheet (Figure 2 and Column 4, lines 37-45).

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481**. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

John L. Goff
October 17, 2002